

' In re Appln. No. 10/526,073  
' Amdt. dated August 15, 2006  
Reply to Notice to Comply July 19, 2006

**IN THE SEQUENCE LISTING**

Please substitute the attached Sequence Listing  
section for the originally filed Sequence Listing.

HOKAZON01 (AOYB).ST25.txt  
SEQUENCE LISTING

<110> TAKARA BIO INC.  
HOKAZONO, Shigekazu  
UEMORI, Takashi  
TANAKA, Tetsuki  
KATO, Ikunoshin

<120> Thermostable RNase H

<130> HOKAZON01

<140> 10/536,073

<141> 2005-02-28

<150> JP 2002-254153

<151> 2002-08-30

<150> PCT/JP03/10727

<151> 2003-08-26

<160> 16

<170> PatentIn version 3.3

<210> 1

<211> 211

<212> PRT

<213> Archaeoglobus profundus

<400> 1

Met Ile Ala Gly Ile Asp Glu Ala Gly Lys Gly Pro Val Ile Gly Pro  
1 5 10 15

Leu Val Ile Cys Gly Val Leu Cys Asp Glu Glu Thr Val Glu Tyr Leu  
20 25 30

Lys Ser Val Gly Val Lys Asp Ser Lys Lys Leu Asp Arg Arg Lys Arg  
35 40 45

Glu Glu Leu Tyr Asn Ile Ile Lys Ser Leu Cys Lys Val Lys Val Leu  
50 55 60

Lys Ile Ser Val Glu Asp Leu Asn Arg Leu Met Glu Tyr Met Ser Ile  
65 70 75 80

Asn Glu Ile Leu Lys Arg Ala Tyr Val Glu Ile Ile Arg Ser Leu Met  
85 90 95

Pro Lys Val Val Tyr Ile Asp Cys Pro Asp Ile Asn Val Glu Arg Phe  
100 105 110

Lys His Glu Ile Glu Glu Arg Thr Gly Val Glu Val Phe Ala Ser His  
115 120 125

Lys Ala Asp Glu Ile Tyr Pro Ile Val Ser Ile Ala Ser Ile Val Ala  
130 135 140

HOKAZONO1 (AOYB).ST25.txt

Lys Val Glu Arg Asp Phe Glu Ile Asp Lys Leu Lys Lys Ile Tyr Gly  
145 150 155 160

Asp Phe Gly Ser Gly Tyr Pro Ser Asp Leu Arg Thr Ile Glu Phe Leu  
165 170 175

Arg Ser Tyr Leu Arg Glu His Lys Ser Phe Pro Pro Ile Val Arg Lys  
180 185 190

Arg Trp Lys Thr Leu Lys Arg Leu Thr Thr His Thr Leu Ser Asp Phe  
195 200 205

Phe Glu Val  
210

<210> 2  
<211> 636  
<212> PRT  
<213> Archaeoglobus profundus

<400> 2

Ala Thr Gly Ala Thr Thr Gly Cys Thr Gly Gly Gly Ala Thr Ala Gly  
1 5 10 15

Ala Cys Gly Ala Ala Gly Cys Thr Gly Gly Ala Ala Ala Ala Gly Gly  
20 25 30

Ala Cys Cys Thr Gly Thr Ala Ala Thr Ala Gly Gly Cys Cys Cys Thr  
35 40 45

Cys Thr Thr Gly Thr Ala Ala Thr Ala Thr Gly Cys Gly Gly Ala Gly  
50 55 60

Thr Ala Cys Thr Gly Thr Gly Cys Gly Ala Thr Gly Ala Ala Gly Ala  
65 70 75 80

Gly Ala Cys Cys Gly Thr Ala Gly Ala Ala Thr Ala Cys Thr Thr Gly  
85 90 95

Ala Ala Gly Ala Gly Cys Gly Thr Ala Gly Gly Cys Gly Thr Thr Ala  
100 105 110

Ala Ala Gly Ala Thr Thr Cys Ala Ala Ala Gly Ala Ala Gly Cys Thr  
115 120 125

Gly Gly Ala Thr Ala Gly Gly Ala Gly Gly Ala Ala Gly Ala Gly Ala  
130 135 140

Gly Ala Gly Gly Ala Ala Cys Thr Thr Thr Ala Cys Ala Ala Thr Ala  
145 150 155 160

Thr Cys Ala Thr Ala Ala Ala Ala Thr Cys Gly Cys Thr Thr Thr Gly  
Page 2

165

170

175

Cys Ala Ala Gly Gly Thr Thr Ala Ala Gly Gly Thr Ala Thr Thr Gly  
 180 185 190

Ala Ala Ala Ala Thr Ala Thr Cys Thr Gly Thr Cys Gly Ala Gly Gly  
 195 200 205

Ala Thr Thr Thr Gly Ala Ala Cys Ala Gly Gly Thr Thr Ala Ala Thr  
 210 215 220

Gly Gly Ala Ala Thr Ala Cys Ala Thr Gly Ala Gly Thr Ala Thr Ala  
 225 230 235 240

Ala Ala Thr Gly Ala Ala Ala Thr Cys Thr Thr Gly Ala Ala Gly Ala  
 245 250 255

Gly Ala Gly Cys Thr Thr Ala Cys Gly Thr Thr Gly Ala Ala Ala Thr  
 260 265 270

Ala Ala Thr Ala Ala Gly Gly Thr Cys Thr Thr Thr Gly Ala Thr Gly  
 275 280 285

Cys Cys Thr Ala Ala Ala Gly Thr Thr Gly Thr Gly Thr Ala Cys Ala  
 290 295 300

Thr Ala Gly Ala Cys Thr Gly Thr Cys Cys Ala Gly Ala Thr Ala Thr  
 305 310 315 320

Thr Ala Ala Thr Gly Thr Gly Gly Ala Gly Ala Gly Ala Thr Thr Thr  
 325 330 335

Ala Ala Gly Cys Ala Cys Gly Ala Ala Ala Thr Ala Gly Ala Gly Gly  
 340 345 350

Ala Gly Ala Gly Ala Ala Cys Gly Gly Gly Ala Gly Thr Gly Gly Ala  
 355 360 365

Gly Gly Thr Ala Thr Thr Thr Gly Cys Gly Ala Gly Cys Cys Ala Thr  
 370 375 380

Ala Ala Ala Gly Cys Gly Gly Ala Cys Gly Ala Gly Ala Thr Ala Thr  
 385 390 395 400

Ala Thr Cys Cys Ala Ala Thr Ala Gly Thr Ala Thr Cys Thr Ala Thr  
 405 410 415

Ala Gly Cys Thr Thr Cys Gly Ala Thr Ala Gly Thr Cys Gly Cys Ala  
 420 425 430

Ala Ala Ala Gly Thr Thr Gly Ala Ala Ala Gly Gly Gly Ala Thr Thr  
 Page 3

435 HOKAZON01 (AOYB).ST25.txt 440 445

Thr Thr Gly Ala Ala Ala Thr Ala Gly Ala Cys Ala Ala Gly Cys Thr  
450 455 460

Gly Ala Ala Gly Ala Ala Gly Ala Thr Thr Thr Ala Thr Gly Gly Ala  
465 470 475 480

Gly Ala Cys Thr Thr Thr Gly Gly Gly Ala Gly Thr Gly Gly Ala Thr  
485 490 495

Ala Thr Cys Cys Ala Thr Cys Ala Gly Ala Thr Cys Thr Ala Ala Gly  
500 505 510

Ala Ala Cys Cys Ala Thr Cys Gly Ala Ala Thr Thr Thr Thr Thr Ala  
515 520 525

Ala Gly Gly Ala Gly Thr Thr Ala Thr Cys Thr Ala Ala Gly Gly Gly  
530 535 540

Ala Ala Cys Ala Cys Ala Ala Ala Ala Gly Thr Thr Thr Thr Cys Cys  
545 550 555 560

Ala Cys Cys Ala Ala Thr Cys Gly Thr Ala Ala Gly Ala Ala Ala Gly  
565 570 575

Ala Gly Ala Thr Gly Gly Ala Ala Ala Ala Cys Thr Cys Thr Cys Ala  
580 585 590

Ala Ala Ala Gly Ala Thr Thr Gly Ala Cys Ala Ala Cys Gly Cys Ala  
595 600 605

Cys Ala Cys Thr Thr Thr Ala Ala Gly Cys Gly Ala Thr Thr Thr Cys  
610 615 620

Thr Thr Thr Gly Ala Ala Gly Thr Thr Thr Ala Gly  
625 630 635

<210> 3  
<211> 23  
<212> DNA  
<213> Artificial

<220>  
<223> synthetic

<220>  
<221> misc\_feature  
<223> PCR primer RN-F1 for cloning a gene encoding a polypeptide having  
a RNaseH activity from Archaeoglobus profundus

<220>  
<221> misc\_feature  
<222> (18)..(18)

<223> n is a, c, g, or t

<400> 3

ggcattgatg aggctggnar rgg

23

<210> 4

<211> 20

<212> DNA

<213> Artificial

<220>

<223> synthetic

<220>

<221> misc\_feature

<223> PCR primer RN-R2 for cloning a gene encoding a polypeptide having a RNaseH activity from Archaeoglobus profundus

<220>

<221> misc\_feature

<222> (18)..(18)

<223> n is a, c, g, or t

<400> 4

ggtagggaaa gctgraancg

20

<210> 5

<211> 22

<212> DNA

<213> Artificial

<220>

<223> synthetic

<220>

<221> misc\_feature

<223> PCR primer AprRN-1 for cloning a gene encoding a polypeptide having a RNaseH activity from Archaeoglobus profundus

<400> 5

ctcttcacgc cacagtactc cg

22

<210> 6

<211> 22

<212> DNA

<213> Artificial

<220>

<223> synthetic

<220>

<221> misc\_feature

<223> PCR primer AprRN-2 for cloning a gene encoding a polypeptide having a RNaseH activity from Archaeoglobus profundus

<400> 6

tttgcgagcc ataaagcgga cg

22

<210> 7

<211> 17

<212> DNA

<213> Artificial

<220>

<223> synthetic

<220>

<221> misc\_feature

<223> Tag sequence

<400> 7

ggcacgattc gataacg

17

<210> 8

<211> 39

<212> DNA

<213> Artificial

<220>

<223> synthetic

<220>

<221> misc\_feature

<223> PCR primer AprNde for amplifying a gene encoding a polypeptide having a RNaseH activity from Archaeoglobus profundus

<400> 8

aatcgatggt gttcatatga ttgctgggat agacgaagc

39

<210> 9

<211> 39

<212> DNA

<213> Artificial

<220>

<223> synthetic

<220>

<221> misc\_feature

<223> PCR primer AprBam for amplifying a gene encoding a polypeptide having a RNaseHIII activity from Archaeoglobus profundus

<400> 9

gcccacgccc tgggatccct aggctacggg tcctttaag

39

<210> 10

<211> 560

<212> DNA

<213> Hepatitis B virus

<400> 10

ccttcccatg gctgctcggg tgtgctgcca actggatcct gcgcgggacg tcctttgtct 60

acgtcccgtc ggcgctgaat cccgcggacg acccgctctcg gggccgtttg ggcctctacc 120

gtcccttgct ttctctgccg ttccagccga ccacggggcg cacctctctt tacgcggtct 180

ccccgtctgt gccttctcat ctgccggacc gtgtgcactt cgcttcacct ctgcacgtcg 240

catggagacc accgtgaacg gccaccaggt cttgcccag ctcttacata agaggactct 300

tggactctca gcaatgtcaa caaccgacct tgaggcatac ttcaaagact gtttgtttaa 360

HOKAZON01 (AOYB).ST25.txt

agactgggag gagttggggg aggagattag gttaaagggtc tttgtactag gaggctgtag	420
gcataaattg gtctgttcac cagcaccatg caactttttc acctctgcct aatcatctca	480
tgttcatgtc ctactgttca agcctccaag ctgtgccttg ggtggctttg gggcatggac	540
attgaccgtg ataaagaatt	560

<210> 11  
 <211> 20  
 <212> DNA  
 <213> Artificial

<220>  
 <223> synthetic

<220>  
 <221> misc\_feature  
 <223> Chimeric oligonucleotide primer to amplify a portion of Hepatitis B virus X protein.

<220>  
 <221> misc\_feature  
 <222> (18)..(20)  
 <223> nucleotides 18 to 20 are ribonucleotides-other nucleotides are deoxyribonucleotides

<400> 11  
 ctcttgact ctcagcaaug 20

<210> 12  
 <211> 22  
 <212> DNA  
 <213> Artificial

<220>  
 <223> synthetic

<220>  
 <221> misc\_feature  
 <223> Chimeric oligonucleotide primer to amplify a portion of Hepatitis B virus X protein.

<220>  
 <221> misc\_feature  
 <222> (20)..(22)  
 <223> nucleotides 20 to 22 are ribonucleotides-other nucleotides are deoxyribonucleotides

<400> 12  
 tcctccagc ctttaaacam ac 22

<210> 13  
 <211> 20  
 <212> DNA  
 <213> Artificial

<220>  
 <223> synthetic

<220>  
 <221> misc\_feature



```

HOKAZON01 (AOYB).ST25.txt
<223> Chimeric oligonucleotide designed as probew1.

<220>
<221> misc_feature
<222> (9)..(9)
<223> nucleotide 9 is ribonucleotides-other nucleotides are
      deoxyribonucleotides

<400> 13
cctacgccac cagctccaac                                     20

<210> 14
<211> 20
<212> DNA
<213> Artificial

<220>
<223> synthetic

<220>
<221> misc_feature
<223> Chimeric oligonucleotide designed as probew2. nucleotides

<220>
<221> misc_feature
<222> (9)..(10)
<223> nucleotides 9 to 10 are ribonucleotides-other nucleotides are
      deoxyribonucleotides

<400> 14
cctacgccac cagctccaac                                     20

<210> 15
<211> 20
<212> DNA
<213> Artificial

<220>
<223> synthetic

<220>
<221> misc_feature
<223> Chimeric oligonucleotide designed as probew3.

<220>
<221> misc_feature
<222> (9)..(11)
<223> nucleotides 9 to 11 are ribonucleotides-other nucleotides are
      deoxyribonucleotides

<400> 15
cctacgccac cagctccaac                                     20

<210> 16
<211> 49
<212> DNA
<213> Artificial

<220>
<223> synthetic

<220>

```

.  
.

HOKAZON01 (AOYB).ST25.txt

<221> misc\_feature

<223> Oligonucleotide designed as templatew49.

<400> 16

ataaacttgt ggtagttgga gctggtggcg taggcaagag tgccttgac

49